

FIG.. 1

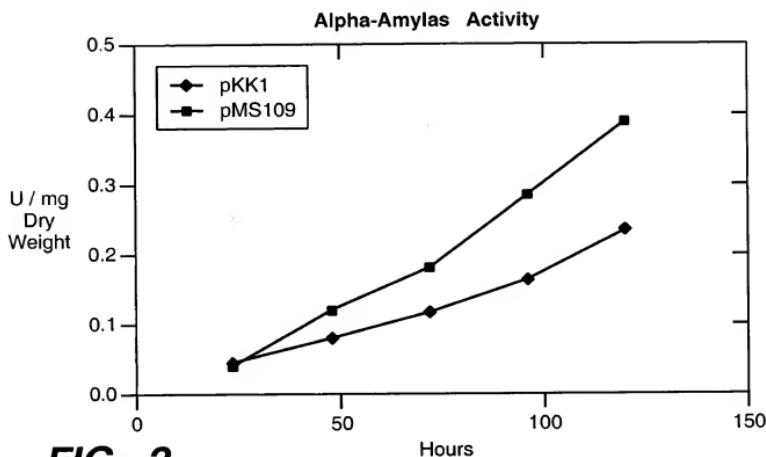


FIG._2

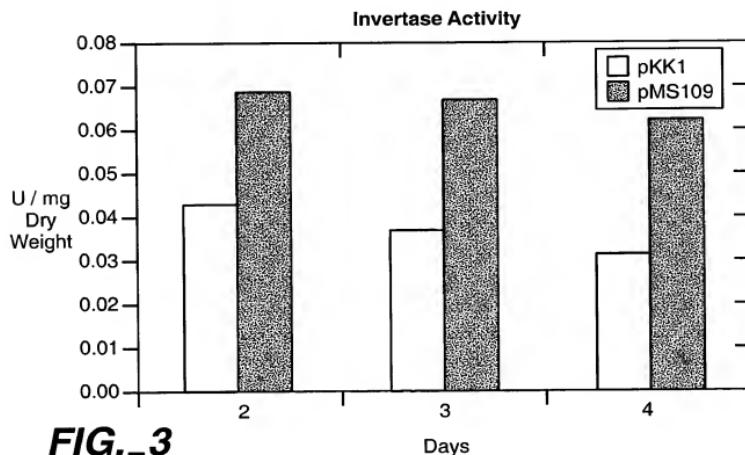


FIG._3

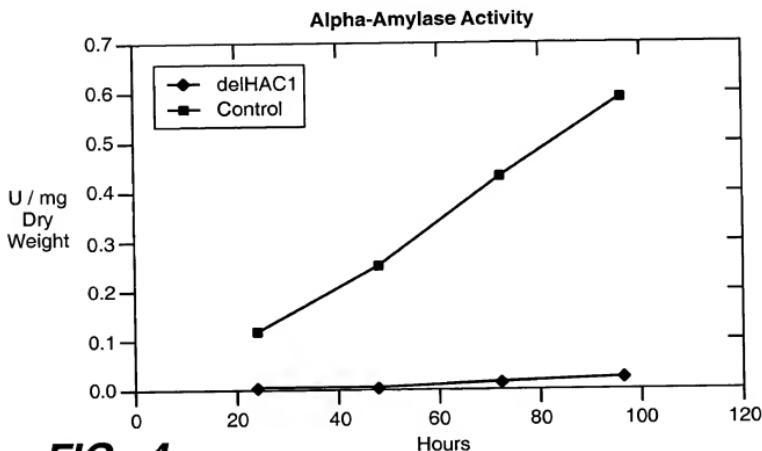


FIG. 4

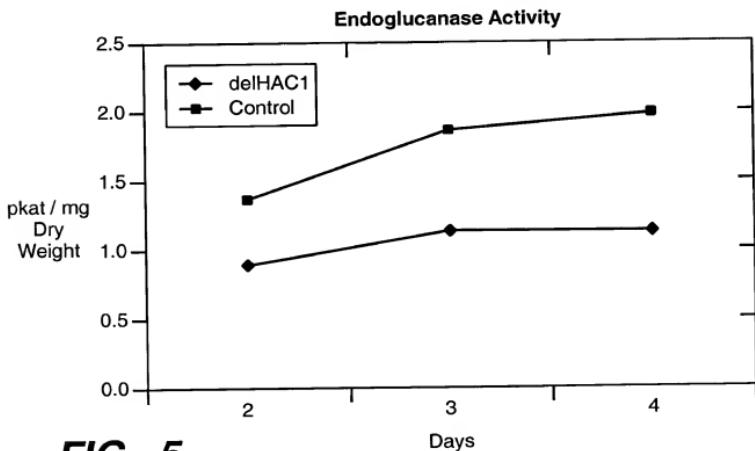


FIG. 5

FIG._6

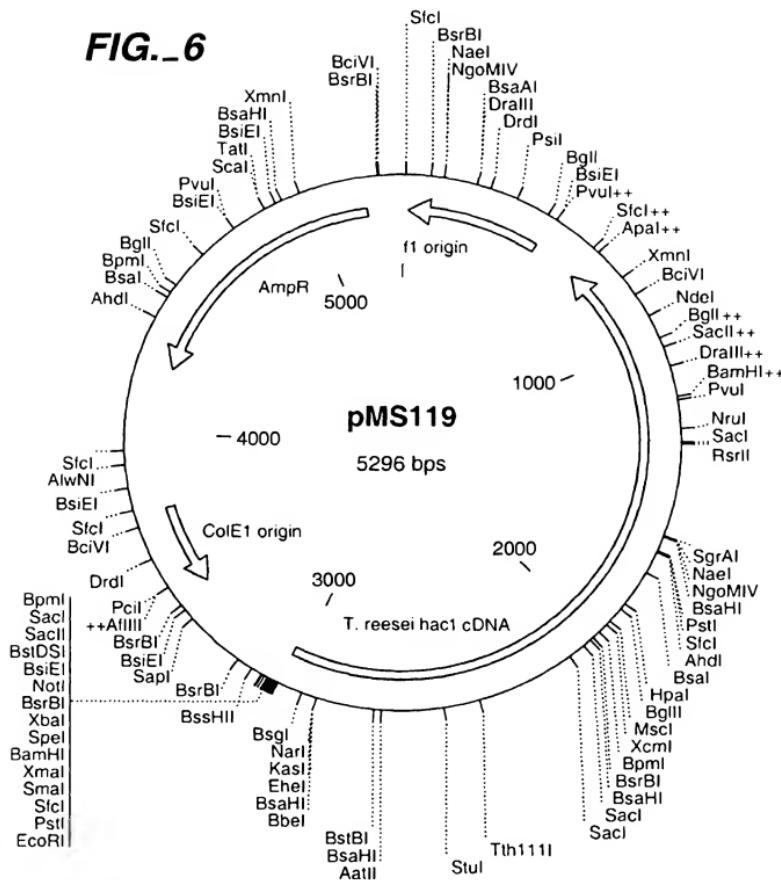


FIG. 7A

FIG. 7B

GTGCCTACCGAGCGTGACCTTGCGTCTCGAGAAGTCCTCATCACCCCTGTGGTGGCCGTGAAGGTGGAGGAGGGATTCGCCCTGAG 2070
GCAGCACAAAGCAGGCCGGCTCTCGACCCCGAGAACGGCGCTCCTGGCAGACAAAGAGAACCGACAAACAAACAAACAAACA 2160
CCAGTATCAGATTCCTCGTTTCAAAATAGTTAGCATATGGTTTTAATGGCAATGGCTTTTATGGCGATGGCAACACGGTAGGGCAACA 2250
AGGTTGACTACACCTCCAAAGGGATAACGGCAGACAGGAGGTAAATGACAAGGCTAAGATGGCTTATGAGAAC 2340
CTCTCATCTCCCTTTACACTTCCTCATGGTAGTGTGATGATACTGTACCAAAATAAACGTCTACCTAGTGT 2418

FIG.-7C

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GCCATTCCTGGTGAATGAGCCCCAACACTTTCACCTGGGGATAGTAGCCTCTGGCTCGATTCGCTATGACACCGTGGCCTCTGTCCT 90
AAGTGACTCAGGCAGGCATTCGGCAACTTCCAGGTTCAACTCCAACTCTGGCAACCTCCTGGCTTCAGTTGCAAGTTATCAGACT 180
TGAGTGTGTGAAATCAGGAGACCGGTTGGCAAGTGTGAAAATGGAGGAGCCTTGGCAAAACTCTGGCTTGGCTACTACCCGTCTATTGGGG 270
M K S A D R F S P V K M E D A F A N S L P T T P S L E
TTCTCTGGTCACTGTCCTCCCGGGTGCACATCTTCGGACGAAAGAATGGGGCTTCGACAAAGGCTTGAGGAAGAGAGCCAGGGA 360
V P V L T V S P A D T S L R T K N V V A Q T K P E E K K P A
AGAAAAAGTCTGGGGCAGGAAATTACCAAGTACCAAGAACACTTACCTCCAAGAGTgtgtgtataacctcaagactcaactcccttaact 450
K K R K S W G Q E L P V P K T N L P P R
cctgtcaataactaccacAGAAAACCGGCTAAAGACAGAAGATGAGAAAGCAGGGCCGGATTGAGCGAGTTCTGCACACCGCGAGCC 540
K R A K T E D E K E Q R R I E R V L R N R A A
GCACAAAACCTCTCGCGAGCGCAAGAGACTGAAATGGAGAAGGTTAGAAAGGAGAAAGATGAAACACAAAACAGTTCCCTCTTT 630
A Q T S R E R K R L E M E K L E S E K I D M E Q Q N Q F L L
CAGGCCTCCGCCAGATGGGGCTGAGAACACCGTTTAAGTCAGCAAAGTGTGCTCAGCTATCCGGCGAGGGTTCGGGGATCCGGCCACAGC 720
Q R L A Q M E A E N R L S Q V A Q L S A E V R G S R H S
ACTCCAACCTTCAGTCCCCGGCTCAGTTGGCCTAACACTCTCACACCGACTCTTAAAGGAGGGATGAGGTTCTCTGGACCGC 810
T P T S S S P A S V S P T L T P T L F K Q E G D E V P L D R
ATCCCTTCAACTCCCTCGTGAACCGACTACTCCCAACTCTTAAGGCCCTTCATCTCTGGCTGAGTCCCCGATTGACACAACATCTC 900
I P F P T P S V T D Y S P T L K P S S L A E S P D L T Q H P
GCagcgatgtgtgcacccTgcAGTGTGGGGCTCGAAGGGAGTAAAAGTGCCTTCAGGCTTTGACCTCGGGCAGGCATTA 990
A V S V G L E G D E S A L T L F D L G A S I

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FIG.-8A

AGCATGAGCCTACATGACCTTACAGCTCTCTTGACATGACTCTCCGCGCTTATTCACGTTGATTCTACCCCTTGAGTCGATT 1080
 K H E P T H D L T A P L S D D F R R L F N G D S S L E S D
 CTTCACTCTTGAAAGGGTTCTGACTCAGGAGATTATCAGGATTCTCATGATTCTATGGATTCTATGGTTGATTTGACA 1170
 S S L L E D G F A F D V L D S G D L S A F P F D S M V D F D
 CCGAGCCCTGTCACCCCTCGAAAGATCTGGAGAAACCAAGGGCTTTCGGATTCAAGCTCTTGCAAGGGCTCTAGCTTGCACCCAGGCCATG 1260
 T E P V T L E D L E Q T N G L S D S A S C K A A S L Q P S H
 GCGCCTGTCACCTTCGGATTCGACGGCGATTGCGAGCTGGCTGCGATAATCTCTTGAGAAACGGAGGGATAAATCTCTTGAGAAACGCTTG 1350
 G A S T S R C D G Q G I A A G S A
 GTAGAGGGTGTGGATGGCTGGGAATCTCTGTTAACGGTAGGCTGGGGATAAATCTCTTGAGAAACGGAGGGACGAGAAGAACCTTG 1440
 AGGGTCTTGTGATTCTGGCTTAAAGGGGGTGGGCTATTGATTCGGGAAGCGGTAAAGGGTCAAGGGTCACTGAGTTCACTAGCCCA 1530
 AGAGAGCGGTGAGCTCTCGAGAAAAGGGCTTATGATAATTGTTGATTCAGGCTGTGCACTTAAGCAATTAAGCGGCAATTG 1615

FIG.-8B

Yeast
A. nidulans
T. reesei

<i>T. reesei</i>	CCACTGATTCGACACAAACGCTCTG	caaggaaatgttgtcgaccggc	AGTGTGCAATCGTGG	1451
<i>A. nidulans</i>	***	***	***	937

FIG. 9

T. reesei	MAFQQSSPLVKFEASPAESFLSAPGDNFTSLFADSTPSTLNPRDMMTPDS	50
A. nidulans	MKSADRFSVPVKMEDA-----	34
	*** * * .	*
T. reesei	VADIDSRLSVPESQDAEDDESHSTSATAPSTSEKKPVKKRKGQVLP	100
A. nidulans	PADTSRLTKNVVAQTKPE-----	69
	*** * .	*****
T. reesei	PKTNLPPRKRKAKTDEKEQRRVERVLRNRAAQSSRERKRLEVALEKRN	150
A. nidulans	PKTNLPPRKRKAKTDEKEQRRIERVLRNRAAAQTSRERKRLEMEKLE	119
Yeast	*KSTLPPRKRKAKTKEEKEQRRIERVLRNRAAHQSREKKRLHLQYLERKC	71
	. **. ***. ***. ***. ***. ***. ***. ***. ***.	***
T. reesei	KELETLLINVQTKTNLILVEELNRFRSSGVVTRSSPLDSLQDSITLSQQ	200
A. nidulans	IDMEQQN---QFLLQRLAQMEAENNRLSQSQQVAQLSAEVGRSRHSTPTSS	166
Yeast	SLLENLLNSVNLEK---LADHE	*
	***	*
T. reesei	LFGSRDGQTMNSNPEQSLMDQIMRSAANPTVNPASLSPSLPPISDKEFQTK	250
A. nidulans	PASVSPTLTPTLFKQEGDEVPLDRIPFPTPSVTDYSPTLKPSLAE---	212
	***	***. ***. ***. ***. ***. ***.
T. reesei	EEDEEQADEDDEEMEQTWHETKEAAAEEKNSKQSRVSTDSTQRPRAVSI	300
A. nidulans	-----	226
	***	***. ***. ***. ***.
T. reesei	DAAVPVFSDDAGANCLGLDPVHQDDGPFSIGHSFGLSAALDADRYLLESQ	350
A. nidulans	LEGDESALTL---FDLGASIKHEPTHDLTAPLSDDDFRRLFNGDSSLES	273
	***	***. ***. ***. ***.
T. reesei	LLASPNASTVDDDYLAGDSAACFTNPLPSDYDFDINDFLTDDANHAAYDI	400
A. nidulans	SSLLEDGFADFV---LDSGDLSAFFDSMVDFDTEPVTLLEDLEQTNGLS	319
	***	***. ***. ***. ***. ***.
T. reesei	VAASNYAAADRELDEIHDPENQIPSRHSIQQQPSGASSHGCDDGGIAVGV	451
A. nidulans	DSASCKAASL-----	350
	***. ***.	***. ***. ***. ***.

FIG._10

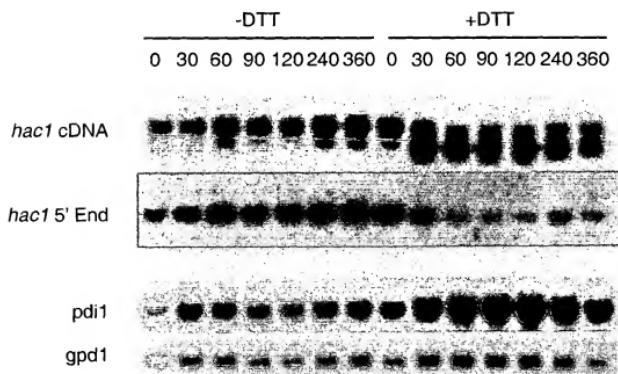


FIG._11

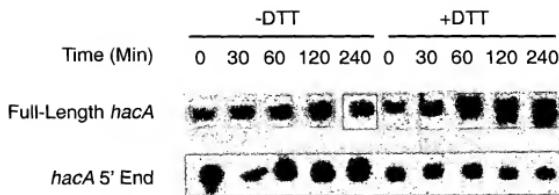


FIG._12

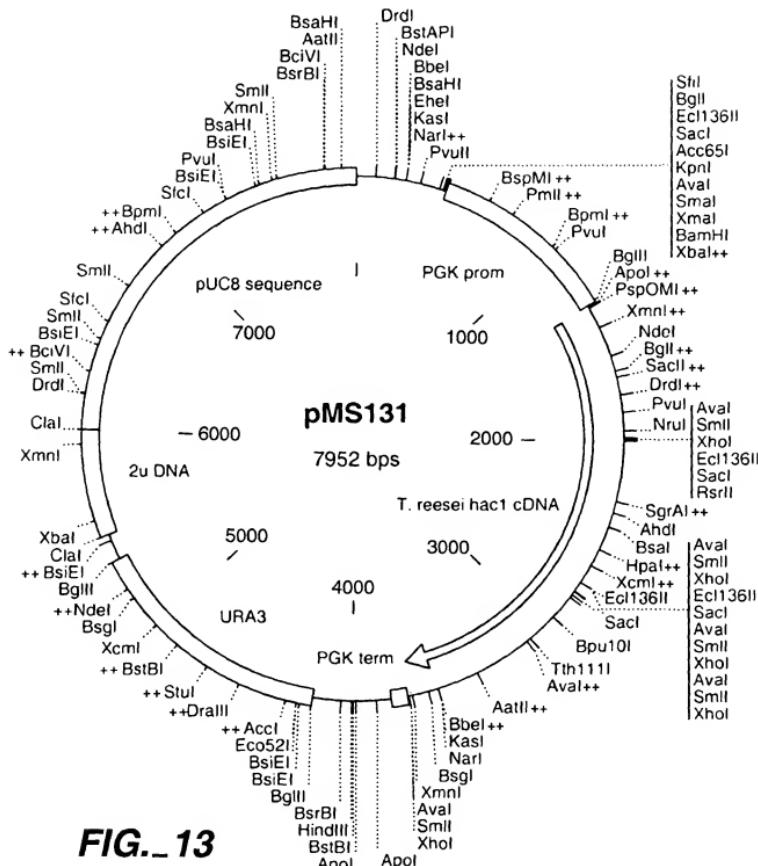


FIG.- 13

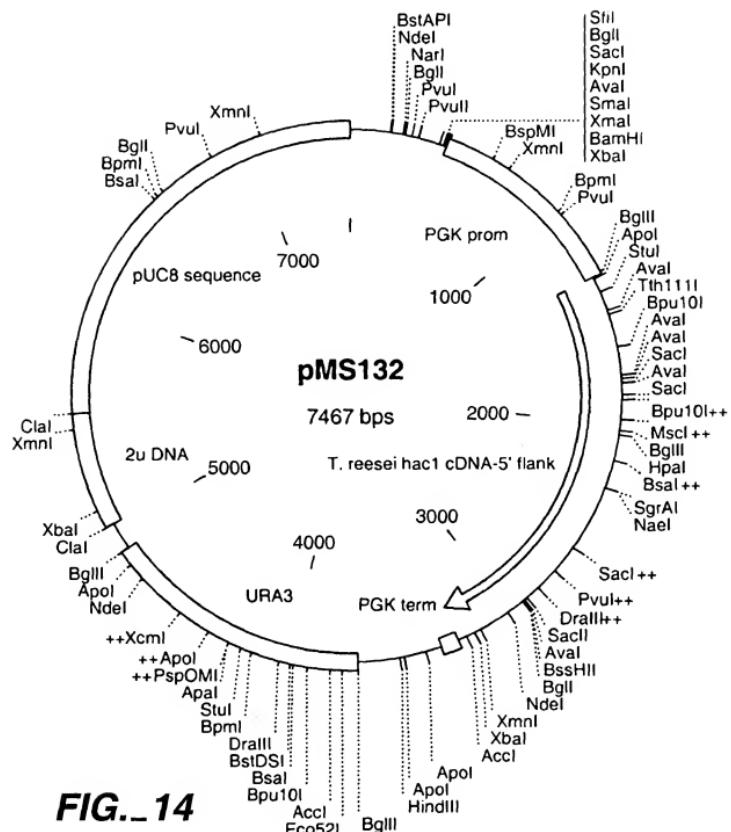


FIG.-14

FIG.- 15A

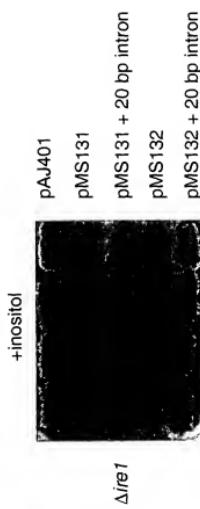
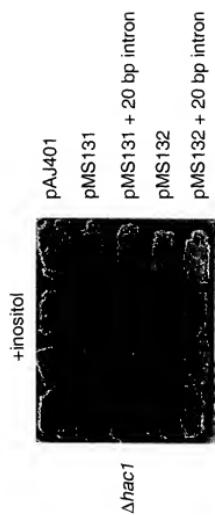


FIG.- 15C

FIG.- 15B

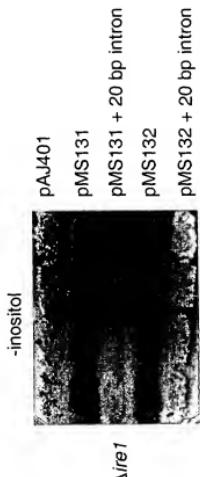
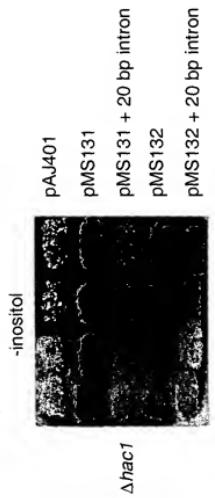


FIG.- 15D

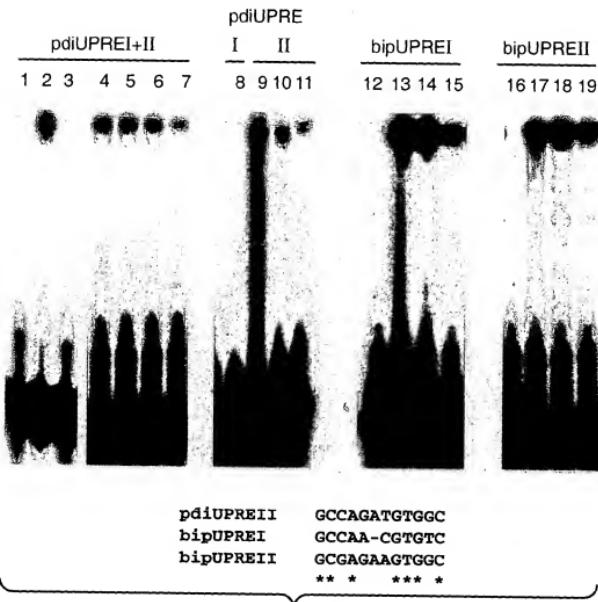
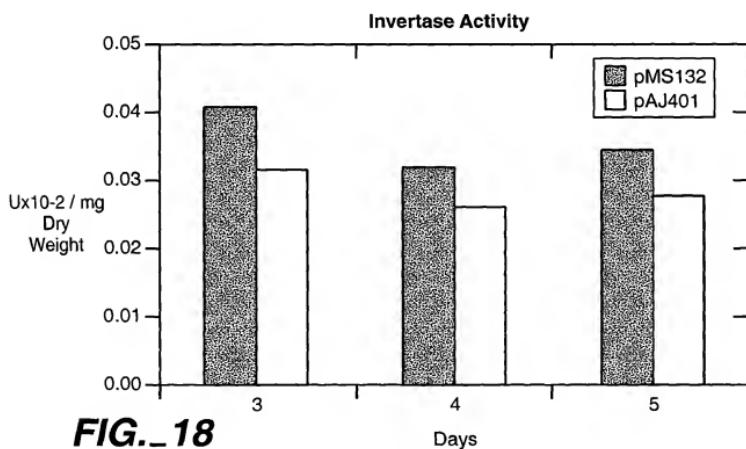
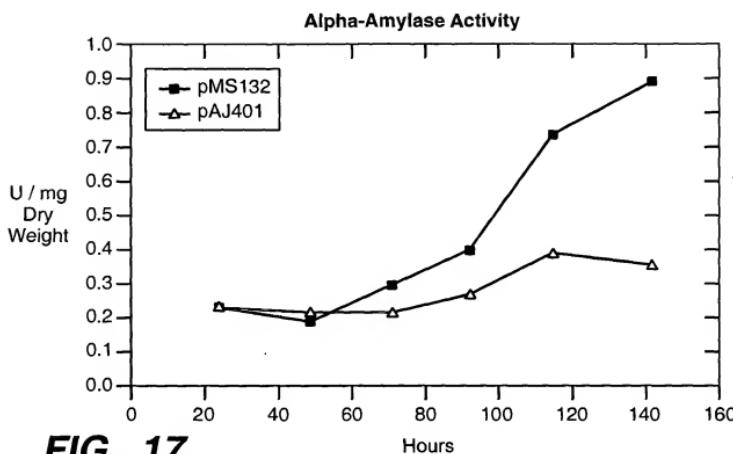


FIG.-16



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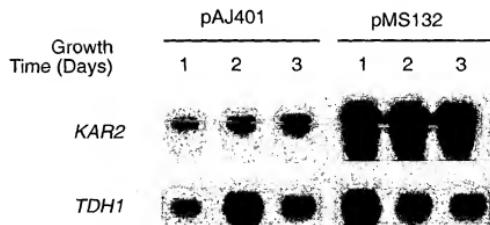


FIG._19A

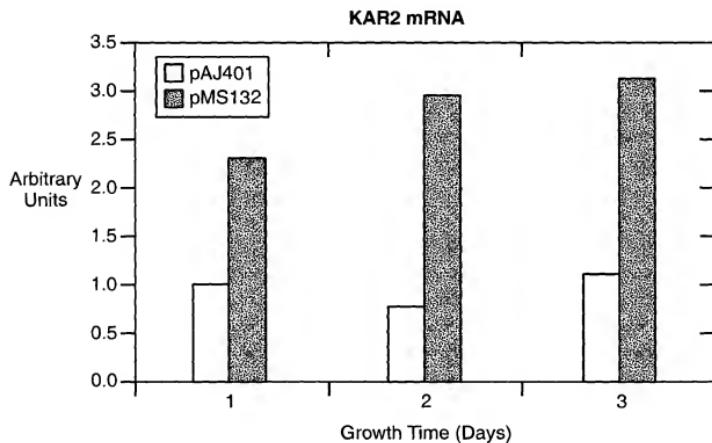


FIG._19B

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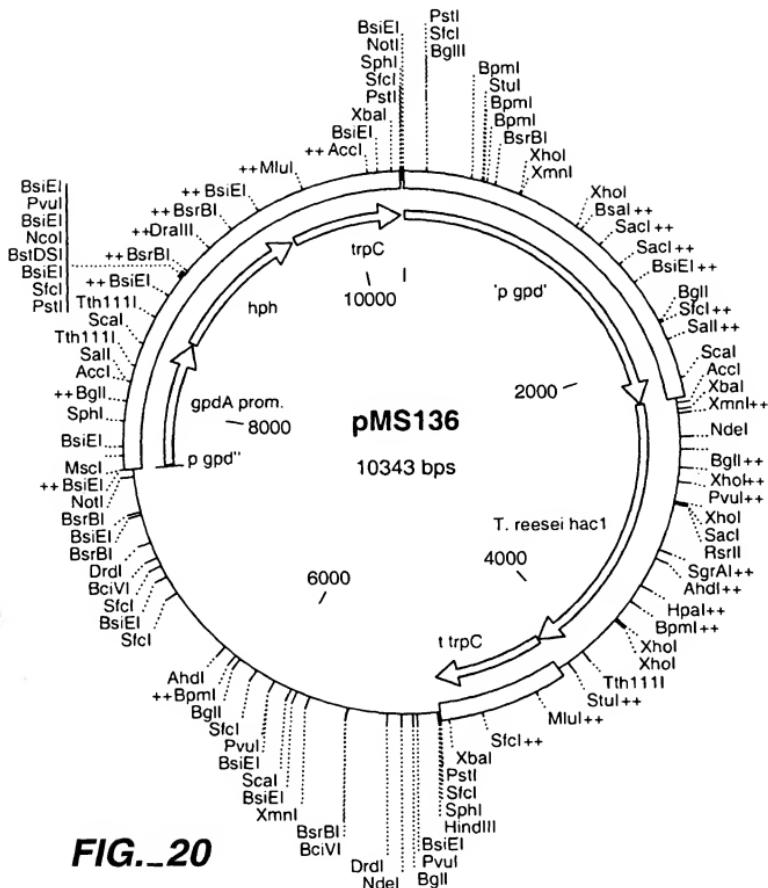


FIG._20

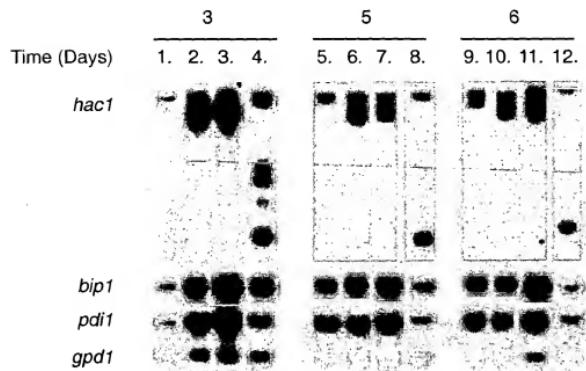


FIG._21A

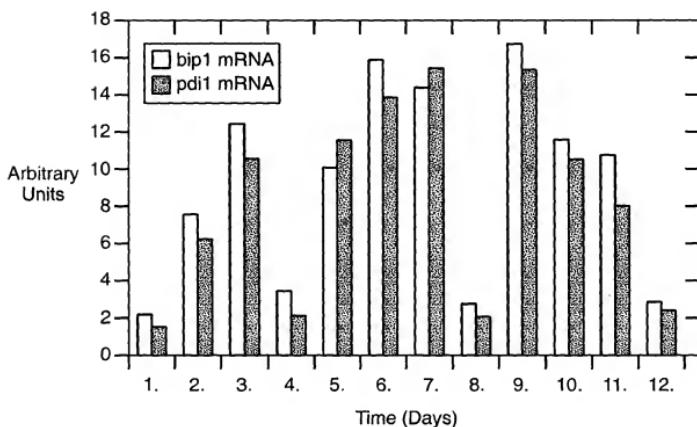


FIG._21B

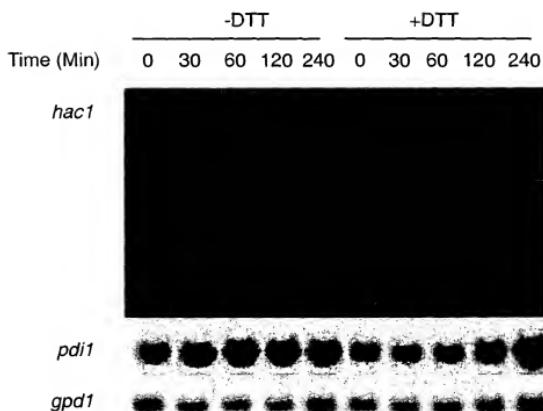


FIG._22A

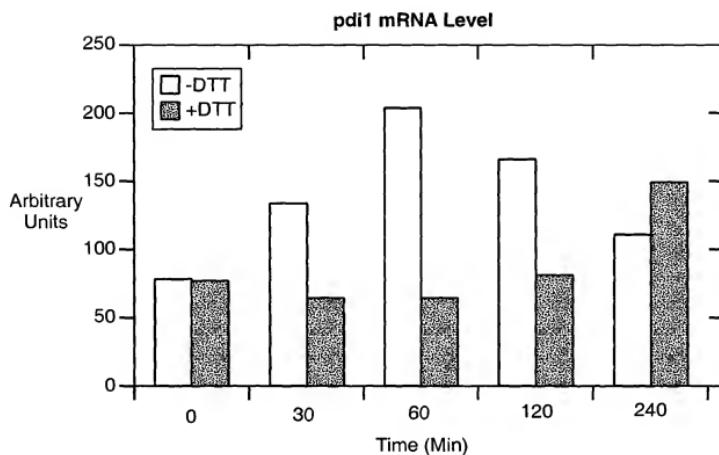


FIG._22B

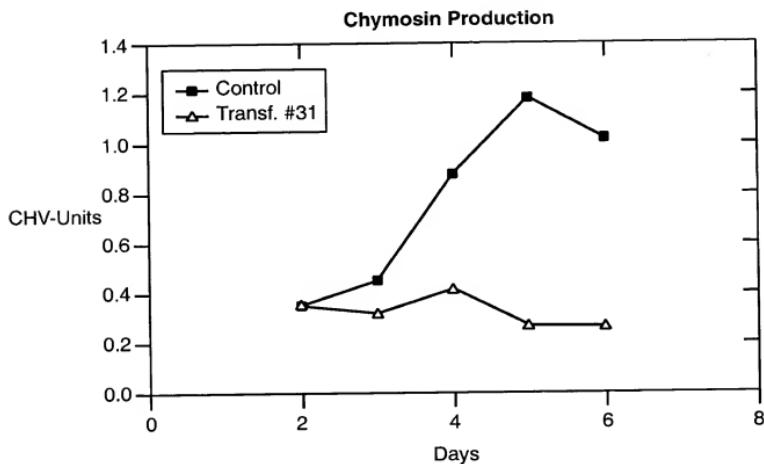


FIG._23

1 TTTGAACAGCAGATCGTTACTGCCTACCCAGACGTTACAGTCCACGAGCTACGGAGGAC
F E Q Q I V T A Y P D V T V H E L T E D
61 GATGAATTCTTAGTAAATCGCTGCGATGtggggttccctcaactttgcgcctgttc
D E F L V I A C D G
121 cacaatctgtatatactacaggAAATCTGGGATTGCCAGTCTTCCAAGCCGGTGGTCGAATT
I W D C Q S S Q A V V E F
181 CGTTGCCGGGTATCGCGGCCAAGCAGGATCTCTATCGGATTTGTGAAAACATGATGGA
V R R G I A A K Q D L Y R I C E N M M D
241 CAACTGTCTCGCTTCCAACAGTGGAGACTGTGGAGTTGGCTGTGACAAACATGACAATGGT
N C L A S N S E T G G V G C D N M T M V
301 CATTATAGGTCCTCCAATGGAAAAACTAAAGGAGAGTGGTACAACAGATCGCGGAGCG
I I G L L N G K T K E E W Y N Q I A E R
361 GGTTGCTAACCGCGACGGCCCTTGCTCGCCGGAATACGGCAAGTCTCTCGAGGAAAC
V A N G D G P C A P P E Y G K S L E E P
421 CACGGCCTCCAACTCCCTACTGACTGAACCGTGGGGTTGCAGCTGAATTCCGAGGACCTG
T A S P Y *
481 GAATCCATAACCATTTGAAGAGAACCCGGACGAGATCGAGATCGACCCACGATCGCTCC
541 GCCCATTCACGTCGGTTCTGGTAGAAATAATTCTTGGAGATGGCAGCACGTTAAC
601 CAGGAAAACAGAATGACGAGGAACCTTGGACCAAAACGGGGAGGAGAACATACCCAGACC
661 AAGTCCAACCGCAGAAATACCGACACAGAAAAGAATGACCGTGAAGGGAGCAGCTGGGCCTC
721 AATCCGGCTCCCCAGCGAACACGTCGCCCTGGATGGCTCAGAGCCTCTAACACAC
781 CGCAGAAAACCGGCTTCTCGTAGCTTCGTATGAGATTACGCCCTGATTCCCTTCAATT
841 GGTTCCTGAAACGACTCGTAGTTACGATTCAGATTTACGCCCTGATTCCCTTCAATT
901 TGCGAAGGCTTACAATTCTGGCCCCATACGGTCGCTATTGATTCTGTTCTCACGA
961 TTGGAAGGCCATTGGCTGTGACCGCGGAAGAGATGCGAAAGAGACGGACCATATCATCC
1021 CCTCTTATCTCTGTTTAACTCCCATCTCTTACTTTACGAGCTCATCCAGATCAAAT
1081 CACCTTCGTTACTCCAGGATGGATATCTTGAGAATTCCGCGAATGGGTGGAGGCATC
1141 TTCTTTCCCTGTCATCTCTCTATGTTGACATGCGCAAGCGGAGGCCCTACG
1201 AGAGTACGTTTGTTCATGTCGACATAAGATACCGCAACACCAACTATTGACGAACCT
1261 TATAA

FIG._24

1 GACGAGCCTCGATCCGCCCTCGACGCCGCTGGTTCCCCCTTCTTCCTCCCCCT
61 TCAGGCCACCTCTCGTCGCTATAACCTTCTCGACGCCCTACGGTCCCCGCCAGGGCT
121 CGCGTCTCTGAGTACCAACAGATAGAACACAGCTGCTATCTTGTCTGCTGCCCTC
181 CCCTCCCTCGACGCTTCCCTCCCTCGATCGTTTCCGGCCCTCGTAGACGTCGAG
241 CCATGGGGAAACCCCTCGAGGCCGTTGCTGAAAGACTTCGAAAGGGCAGGGATG
M G Q T L S E P V E K T T S E K G E D
301 ACAGACTCATCTACGGCGTGTCCCGCATGCAGGGCTGGCGCATCAGCATGGAGGACGCTC
D R L I Y G V S A M Q W R I S M E D A
361 ACACGGCTGAGCTGAATCTCCCCCACCTGACAACGACACCAAGACGCCACAGGC
H T A E L N L P P D N D T K T H P D R
421 TGTCTCTTTCGGAGCTTCGACGGACACGGAGACAAAGTAGCGTTATTCCGAGGGC
L S F F G V F D G H G G D K V A L F A G
481 AGAACATTCACAACATTGTTTCAGCAGGAGAGCTTCAAATCCGGTATTACGCTCAGG
E N I H N I V F K Q E S F K S G D Y A Q
541 GTCTCAAGGACGGCTTCTCGCTACGGATGCCGTTATCTCAACGACCCCAAATCGAAG
G L K D G F L A T D R A I L N D P K Y E
601 AGGAAGCTCTGGCTGACTCGCTCGCTCACCTGATTGCCGAAACAAACTATGTCG
E E V S G C T A C V T L I A G N K L Y V
661 CCAAGGCCGTGATTCTCGCTACGGCTGCCATCAAGGACGGCCAAACCCCTATCCA
A N A G D S R S V L G I K G R A K P L S
721 ACGACCCACAAGCCCTCAGCTTGAACCGAGAAGAACCGAATCACAGCCGCTGGCGTTTCG
N D H K P Q L E T E K N R I T A A G G F
781 TCGACTTTGCCGACTCACCGCAATCTGGCTCTGTCGCTGCCATTGCCGACTTGAAT
V D F F G R V N G N L A L S R A I G D F E
841 TCAAGAAGGCCGAGCTGCTCCCGAAACACAGATCGTTACCGCTTCCCGATGTCG
F K K S A E L S P E N Q I V T A F P D V
901 AGGTGACAGAGCTTACAGAGGAGGACGAGTTCTGGTATTGCTGTGAGGGTATCTGG
E V H E L T E D E F L V I A C D G I W
961 ATTGCCAACATTCCAGGCTCTGGTGTGAGTTGTGCGACGAGGCATGCCGCAAGCAGG
D C Q S S Q A V V E F V R R G I A A K Q
1021 ACCTTGACAAGATCTCGAGAACATGATGGACAATGCGCTTGCCTCCAACTCAGAACCG
D L D K I C E N M M D N C L A S N S E T
1081 GTGGCGTCCGCTGCCACACATGACCATGTCATCATGCCCTTGCAAGGCCAACACCA
G G V G C D N M T M V I I G F L H G K T
1141 AGGAGGAGTGGTATGACGAAATTGCCAAGAGAGTGGCCAACGGAGACGCCCTGTGCC
K E E W Y D E I A K R V A N G D D G P C A
1201 CCCGGAAATGCCGAGTCCGCCGGTCCCGGCTTACCCACAACATCGAAAGACGCCACA
P P C E Y A E F R G P G V H H N Y E D S D
1261 GCGGCTACGACGCTCGACGCCGACAGCGGCCAGTTAGCCTTGCGGATCCGGGTC
S G Y D V D A D S G G K F S L A G S R G
1321 GCATCATCTCTGGCGACGCCACCGAACGTTCTGACGGCTCCGACGACACGGAGATGT
R I I F L G D T E V L T G S D D T E M
1381 TTGACAATCTGACAGGAGACAAGGACCTTGGCAGGCCAGGTGCCAACGCTCCGCAAGA
F D N A D E D K D L A S Q V P K S S G K
1441 CCGATGCAAGGAGGAGACAGAGGCCAACGGGCCACAGAGGGAGTCGCTAACCG
T D A K E E T E A K P A P E A E S S K P
1501 CGGATGGGTCGGAGAAGAACAGAACAGAAAAGACACCCGAGGAGAGTAAGAAGGATTAGG
A D G S E K K Q D E K T P E E S K K D *
1561 TGGCTCTCTGAATTCTGGCTCGTCCTGAAAGCCCGCGCTGGTGTGATGG
1621 CGTGTGTTTGTGTGACGTGTCGCAATAATTCTTTTCTTCCCATCACCGCTACTCAAAA
1681 AACCCCAAGGGCTGAGGGCATTTAAATCGTAGGGAGTGGGGAGAGACGGAGAGGC
1741 TCTGGAACGAAACATTCTGGAGACAGGCAGAGGCGTAGGGCGTTAGACATTGAG
1801 TGTGCTGTTAAAAAAAAAAAAAA

CGGGAGCCAAGAGTCATAGACCGGGAAAGAAGAAAATTGAGAGTGAGAAAGAGGAATCTGA
 G G K S H R R G K K K I E S E K E E S D
 TCAAGCCCTGGCACCTTCGACCAACCCCGCTGGGCCGATGCCGGTTAGCTCTCACCCG
 H A P G T L Q P P A G P D A G L A L T R
 CACTGCACTTAATGAGCTGTTGAGCAGCGGTGTCATCCAGAATGGCCGTTGAGGT
 T A S N E V F E A D G V I Q I G R L K V
 CTTACGGCTGACGCTCTGGCTATGGAAGCCACGGACAGTGTGTTACCGCCGGTCGTT
 F T A D V L G H G S H G T V V Y R G S F
 TGAGGCCGAGACGTCGCCGCTCAAACGATGCTGGTGAGATCTCATGATATTGCTACATCCA
 D G R D V A V K R M L V E F Y D I A S H
 CGAAGTGGGGATGTGCGAGGAAAGCGATGATCATAACAAACGTTATCCGATGTTATTGCCG
 E V G L L Q E S D D H N N V I R C Y C R
 TGACCAAGCCAAGGGTTCTCTCATGCCCTGAACTGTGCCGGCTCTTGGCAGGA
 E Q A K G F F Y I A L E L C P A S L Q D
 TGTGGTAGAACGACGACAGCCTCCCGCAGCTAGTCATGGTGGCTGGATATGCCGGA
 V V E R P D A P Q L V N G G L D M P D
 CGCTTCTGGCTCAAATGTGCGGGTGTCCGGTACCTACCTCTCAAAATCTGACACCG
 V L R Q I V A G V T Y L H S L K I V H R
 TGACTTGAGGCCCAAATATCTGTCGCCGCTCTCGAGGCCGATCGGTTCTCGGGC
 D L K P Q N I L V A A P R G R I G S R A
 CATCCGGCTCTGTATTCGGCTTGGCTGTCAAGAAACTTGAGGATAACCCAGACTG
 I R L L I S D F G L C K K L E D D N Q S S
 ATTCAAGGCCAACACCGCCCATGCTGCTGTACTCCGGTGGAGGCTCCCGAACGTGCTT
 F R A T T A H A A G T P G G G L P N C L
 GTGGATGAGCACAAAGGCCGAAATCAGGGTCAGACTCTCAAATACGGAGTCATGTA
 W M T T R A G N Q G S E S Q N T E S S E
 GCCGGCGGCTCTGATGCCGATCCCAGACGAATGAGCCGACCCGAGGATCTTGATCTTC
 P A V V D P Q T N N R R A T R A I D I F S
 CCTGGGATGTGCTCTACTACGCTCAACTCGAGGATGTCACTCTTGTACAGAAATGG
 L G C V F Y Y V L T R G C H P F D K N G
 CAACGGTATGCCGAAGCAAATATGCTCAAGGGGAAATTCTCAATCTGAGTGGATACACGG
 K F M R E A N I V K G N F N L D E L O R
 TCTAGGAGAGTATGGTTGAGCAGACGATCTTATCGATCAATGGCAGTCACTTGATC
 L G E Y A F E A D D L I R S M L A L D P
 ACGTCAACCGtatgtcccaacaacatctcccttgccctgtggctgtagctactaatctc
 R Q R
 cacagCCCCGACGCAAGCGCTGTTAACCATCTTCTCTGGAAATCCGTCGACCGC
 P D A S A V V L T H P P F W N P S D R
 CTTAGCTCTCTGTGACGTTGCCGACACTTCGAGTTCGACCCAGAGATCTCCATCT
 L S F L C D V S D H F E F E P R D P P S
 GACGCCCTCTCTGTCTAGAGCTGTCAGCTGATGCCCTGATCTGATCGGCTC
 D A L L C L E S V A S D V I G P E M N P
 CAAACTCTGCCAAAGGACTCAAAGACAGCTCTGGAAAGCAGCAGGAAATACCCGGCTC
 Q T P A K G L Q R Q S R K Q R K Y T G S
 AAAATGCTGGACTTGTGCGAGCCCTGCGGAACAAGGCCACCAACTACAAATGATGTCG
 K M L D L M R A L R N K R N H Y D M P
 GAGGATTTGAGAGCTCATATTGGCTGGCTGCCGGAGGGTTACTCTGATTTCTGGACCTG
 E H L K A H I G G L P E G Y L N F W T V
 CGCTTCTGCCGAGATTGCTGAGTGTGTCATTGGGTGATTGTGAGTGGCTGACGAG
 R F P S L L M S C H W V V I E L G L T K
 ACGGATCGGTCCAAGAGATATTACGCCATTGGAGTAGGTGTCGCTACTGGTCAAG
 T D R F E C I F Y A I G V G C C V L V Q
 AAAATATATTG
 K Y I

FIG.-26

1 GCACGAGCAAGATA CGGCC TCTCGCACCAAGGAGACACGATATTCTGTTGACCATCGGC
61 TGAGGGTGAAGGGGGTTCAACACAGCACAACTCAGCAGCCACTGGACTGGTGGAGCGCA
121 AGGCCACGATCGAATCCACAGCAGCACCTTCTCCCTCGTCATATTCCGGGGACTCA
181 CAA CGGGTTCCCGTCTCGAATTGACAGACGACTGGCAGCTGGAGTCATTCTCGGAC
241 TCTAAACCTACTCCTTGGCTGCTGGCGGAGACTGGTCTGCCAGCCCTCTCCTACTCGA
301 CCAACCGGACGCTCTTCGCTCTCCATCCCTTCTCCGGGGAAATGGCTTCTCTGGCATCGCAACAGC
361 GCGAATTTCCTTGGCTCTCGTTGGGGGGAAATGGCTTCTCTGGCATCGCAACAGC
421 CTCTACCTCTCCGTTGGTAGAGCCATAGCTCTCAGCTCCCATGTGATCCGCTCTCCGTC
481 TCTCCGGACCCGACTTCTGTCGATCATGATCGGGGACCCCGAGCAAGGACGAT M
541 GGTCCCGCTCGCATCAGAAGCTCTCTGGCTTTGCTTTATTCTCATACCATGGCTCA
V R V A S E A L L A F A F I L I P W L Q
601 A C T T G C G G A T G C T C A G C A G C G C T C A G C A G C C C C A G A T T C G A A T T C A C T C A C A A G A G G
L A D A Q Q Q P Q Q P Q P I R I H S Q R Q
661 C G A C G C G C C C C T T G A C A A A G T G C G C G A C G A T G C C A A C A C C C G T T G G T A C G C A A C A C A T G C
D A P L D K V A D D A N T R W Y A T H A
721 T G C C A C C A G C T G C A C C C C G A A G C G A A G T T C G A C A C C G T C A C A C C G G A A A A G C A G C A
A P D V H P E A K F D T V N R K Q K Q Q
781 G T C G A C C G C T T C G C C C C A G C A A C C A C C A G A A A T A T C G A C G A G G C C C C T A T G A C T A C G C C A G
S T A S P Q Q H Q K Y R A P Y D Y A S
841 C A A G G A C A A G G C C C A G A A C C G A T A T G C G C G A C C C C T A T C C G G A A T C C G G A A A C C A A
K D K K A Q N R Y A H P I R E S E K P N
901 C T A C G T A A A G T C C C C A A C G A T G C G A G G C G C C T C G C A A C T T A G C T C C G G C T C A G C C C G T
Y V K V P N D A S A L A T L A P A Q P V
961 C C G A G C A C C A C A C C T C A C G A C A T C A T G G C C C A G C A G C G C C G C T T C G G G C T G G C
R A P H T S R H W P S S S A S G L A
1021 C T C G C C G C A C A T G C G C G G A G T C T G C G G A G A C T G G A A G T T G A A G A C T T T G T C T C T C G G
S P H N N A R S L E D W V E P S R D G G
1081 G A C C G T C G A T G G A G A C C T C A T G C C A G C G A C C G G A A A G C C C G T C G G C A C C T C T C G G C A C C T
T V D G D L Y A S D R K T G R H L W H L
1141 C G A G G T C G A C C A G C C G A C T G G T G A A G C C A A C A C T A C C G A A C A A C A C T C G T C C T C G A
E V D Q P V V E T K H Y R T N N S V L D
1201 C G A C G A C T A T C G C C C G T C G A C C A C T A C A T C T G G G C C G T C G A G C C G A G C C G C G A T G G A G G
D D Y R P V D H Y I W A V E P S R D G G
1261 G C T C T A T G T A T G G A T C C C C G A C T C C G G A G C G G G C C T C G T C A G G A C C G G C T C A C C A T G A A
L Y V W I P D S G A G L V R T G F T T M K
1321 G C A C C T C G T G A A G A A C T T G C T C C A T A C G C G G G C A G C A G C C C C C G T G T C T A T A C C G G
H L V E E L A P Y A G D E P P V V Y T G
1381 A G A C A A G A A G C A C C A T G G T C A C C C T G G A C G C C G T C A C C G G G C G T C T C A A T G G T
D K K T T M V T L D A A T G R V L K W F
1441 T G G T C T A G C G G C T C C C A A G T C A A C G A A G C C G A G A G C T G C C T T C G G C C C A A T G C T T T G A
G S S G S Q V N E A E S C L R P N A F D
1501 C G A C A G G G A T A C C A C A G A G T G C A G G T C C A T G G G C A C A A T C A C G C T G G G A A G G A C C G A G T A
D R D T T E C S S M G T I T L G R T E Y

FIG.-27A

1561 CACGGTGGGCATCCAGGGCGAGACGGTCGCCCTATCGAACCTTGAAGTACGCAGAATG
T V G I Q R R D G R P I A T L K Y A E W
1621 GGGACCCAACACCTTGTACAGGGACCTCTACCGAATACCAACGGCTCGTGGACAAACCA
G P N T F D S D L Y Q Y H A S L D N H
1681 TTACATCACCACTGAGCAGCACGGAGAATTACCGTTGACAAAGTCACAGGAGAAAA
Y I T S Q H D G R I Y A F D K S Q A E N
1741 CGACCTGCCCTCTACACCCACAAGTTCTCGCTCCCGTGGGGCTTCGATGTC
D L P L Y T H K F S S P V A R F D V C
1801 TCGACCGTGGGATGCGAATGCGGGAGCACCAGCTGGTGGTCTCCCCAACCTC
R P W D A N A G S N P E L V V L P Q P P
1861 AATTCCAGCGCTTGTAGAGAGCACTGTCAGGAAACAGCATCTCCCTCAACCA
I P A L D E S T V K M R S N S I F L N Q
1921 GACTGAAAGCGGCAGCTGGTATGCGCTCCGGCGTGCATCGCTTAACTCGATGC
T E S G D W Y A L S G R A Y P L I L D A
1981 CCCCGTGGCCAGATCTCGCGGAGCACTGGATATGCCCATGCCATTGATCCAT
P V A Q I S R D D L W D M A H A F D S I
2041 TAACCCAAATAAGCTGTCCAAGGCCCTGGGGAAACCCACTTCTGAATCCCGTCAAGAG
N P N K L S K A L V G T H F L N P V K S
2101 CACCGGGTACCATCAGCGCCGACGCTCTCGCCGGCGCCCTCGACGAGTATTACGAGGA
T G Y H Q P P T L P A G A L D E Y E D
2161 CTTGGAGAACGCCAAACAAATGCTCACGGCGTGACAAACACTGTCCGGAGGAGCCAC
L E N A S N N A H A V T N T V P E E P T
2221 CATCATCACCAAGTCAGGCTTCCCGCAGAGTGTGCGAACAGGTCAATTGACTTGT
I I T K V K A L P Q S A A N S V I D F V
2281 CAGCAACCCATTCTCATCATTTCTTGATAGGCTCTTGATCTACAACGAAAAGAACGCT
S N P I L I I F L I G S L I Y N E K L
2341 CGGACGGCTGATCATGGTTCCGGACTCATGGCACAAATCAAGGAGCTATCCCTTCTT
R R S Y H R F R T H G T I K D V Y P F F
2401 CGTTATCGAATCTGAGGCCGGAGATGAATCAGGTGATGACAAGGACGGTGTGTTCCCATC
V I E S E A G D E S G D D K D G V F P S
2461 TTGCGCGTCTCCGCGCAGTCACCCCGAGGACCAAAATCGGGAAAGCACCTGTCCAGACA
S P S P R S Q P Q D Q N A E D H L S R H
2521 CAAGGTGGAGAGGAATGCCGGCAGGACAAGGTCAAGGACAACAGGAGGCCATGA
K V E R N A G D Q D K V K D N R S L H D

FIG.-27B

2581 CGTTTCTGACACCTTGGAAACCGAGCAACAAGACTGTTGAGAAAACGGCCGATGTTGCTAA
V S D T L E P S N K T V E K T A D V V K
2641 GCAAGTGGATGTAGGGCCCTGACGCCACCTCGACGGACTCCAAATGGTGTGCGACCGGA
Q V D V A G P D A P S T D S N G A A P E
2701 GAAGAAGAAGAAGGGCTCAGCGGCGTGTCAAGGACAGAAAAGGGTCCGGC
K K K K A H R G R R G G V K H R K G R P
2761 CACCGACGGCTCGCAGTCTCATGAAACGACCCAGCTCTACTACAGTGACGAGGCTGT
T D G S Q S H E N D P A L T T V D E A V
2821 AAGCAATGCGAAGAAGCTGGTGCACGGCGCAAGCGCTGGAACCCGACGTATGACCATCTA
S N A K K L G D R P S L E P D V M T I Y
2881 CAACGACATCGAAGCGCTCACGGCTCTGGTATCAGCATGGAAACATCGAGGTCGATAC
N D M Q A V T G S V I S M G N I E V D T
2941 GGATGTCGAGCTTGGCATGGCAGAACGAGTACTGTCGTTTGCCTGGCAGATTGATGG
D V E L M G S N G T V V F A G R F D G
3001 CAGGGACGTCGCCTGCAAGGAGAATGACGATTCACTGACATTGCCACCGCGAAC
R D V A V K R M T I Q F Y D I A T R E T
3061 TAAGTTGCTGGCCGAGAGTGCAGCACCCCAATgtaaatcagccctcatgtttcaccc
K L L R E S D D H P N
3121 atttcccttcgctaaacgtaccactgtctgcacGTCATTGGTATTACTCACAACTGCA
V I R Y Y S Q V Q
3181 GCGAGGGCGACTTCTGTATATTGCTTGGAAACGCTCGCTGCTCTTATTGGCAGATGTCAT
R G D F L Y I A L E R C A A S L A D V I
3241 TGAAGGAGCGCTATGCCTTGGTGAATTGGCAAGGGCTGGACAAAAGGACCTACCGGGCT
E K P Y A F G E L A K A G Q K D L P G V
3301 CTGTCACCAATCACCAACGGCATCGCCTACTGCACTCTGCGGATTGTCATCGAGA
L Y Q I T N G I S H L H S L R I V H R D
3361 CTTGAAGCCTAAAACATCTGGTCAACTGGACAAGGACGGCAGACCAAGGCTTGGT
L K P Q N I L V N L D K D G R P R L L V
3421 GTCGGACTTGGCCCTGTGAAGAACCTGGAGGATAGACACTCTTCGTTGGACAGC
S D F G L C K K L E D R Q S S F G A T T
3481 AGGGCGAGCCGCTGGAACGTGGATGGCTGCCCGGAAGTCTCTCGATGACCGACGG
G R A A G T S G W R A P E L L L D D G G
3541 ACAGAAATCCCGCAGCATCGTAGACGACTACCGCACCGGCTCTCACACCATCTCGTGGG
Q N P P A A I D S S T H S G S H T I L V G
3601 AGACCCAACTCGCTTCCAAATGGAGGGCGACGAGGGCATTGACATCTCTCCCT
D P N S L S N G G R A T R A I D I F S L
3661 TGGCCTGCTCTCTACGGCTCACCAAGGATCCACCCGGTTGACTGTCGAGC
G L V F F Y V L T N G S H P F D C G D R
3721 ATATATGCGGGAGGTGAACATTGAAAGGGCAACTACAATCTGATCCATTGGACCTCT
Y M R E V N I R K G N Y L N D P L D A L
3781 GGGCAGCTTGCCTCACGAAGCCAAGGATCTGATTGCGTCATGCTCAGGGCTCTCCAA
G D F F A Y E A K D L I A S M L Q A S P K
3841 GGACGACCCGACTCGGAGGGTCACTGGGACCCCTTCTCTGCTCCGAAGAAGGG
A R P D S R E V M A H P F F W S P K K R
3901 TCTGGCCTTTGTCGAGCTGTCGCTTCTGGAGAAGGGAGGTGCGAGATCTCGC
L A F L C D V S D S L E K E V R D P P S
3961 GCTGCGCTTGGTGCAGCTGGAGCGACATGCCCGAGGTCAATTAGGGAGACTCTTGG
P A L V E L E R H A P E V I K G D F L K
4021 GGTGCTCACCGCGACTTGGCTGAGCTGCTGGCAAGCAGCGCAAGTACACCGGGAAACAA
V L T R D F V E S L G K Q R K Y T G N K
4081 GCTGCTCACCTGTCGCGCTCTCGCAACAGCGGAACACTACGAAAGACATGTCGGA
L L D L L R A L R N K R N H Y E D M S D
4141 CTCGCTGAAGCGCAGGGACTGGTGTAGCTGCTGATGGGTATCTTGGCTTATTGGACGGTCAA
S L K R S V G G S L P D G Y L A Y W T V K
4201 GTTCCCGATGCTGTTGCTGAGCTGCTGGAGACCTGGTGTATAATCTGAGTGGAGAAGAC
F P M L L T C W N V V Y N L E W E K T
4261 GGATCGGTTCAAGGGAGTACTATGAGCCTGCCGGATTGAGAAGAAAAGGAAGAGAA
D R F R E Y Y E P A G L *4321 AAGAAAGGCCCTTGTGTTGGTGTCTGTTATCTTGTGCTGAAGATGGAAACGGA
4381 AAATATTGGGAAGTGTGATGGAGTGAACAAAAGAGGGAAAAATGGTAATGTGAAA
4441 GCAAAGTCGGTTAGCGGGTGGCATGGTGTGTCATCCATGTAAATTGTTCAAGCTCTGTT
4501 CATAAAAGCGTTGTTCTGTTCTT

1 CTTTTTATTGTTCTATGGTCTTAAGGACACCTGTCCCTTCTGGCCCTATCCCTTCTGTT
M V L K D T C P S W P Y P S C
61 GTCCTGGTACACTTGACCCAGGCCAACATTGGCCAGGGCTGGCCCCCGCTTCCCCCG
C L V H L T P G T T W P G L A P P A S P
121 TTATGACACGGTGGCCTGTGTTCTGTGACACGGCAAGCAGCTCCACAAGCTGT
V M T R W P V F L
181 GTGCAACTACATCACCGTCTCCCTTGAGTGGGTTAGATAAGGCTCATAGTAAATCG
241 ATTGATCCACAAATTAAAGATCAATCACCTGTCACTGTCACTGTAAATGATGAAAGAACATCT
M M E E A F
301 CTCCAGTGCACCTCCCTCGCGGTCCCCGACGCCTGAGTTGCCATTGTTGACAGTGTCCC
S P V D S L A G S P T P E L P L L T V S
361 CGGGGGACACGGTGGCTTGATGACTCGTCAAGTACAGGGAGGACCAAGGGGGAAAGAGA
P A D T S L D D S S V Q A G E T K A E E
421 AGAACGCTGTGAAGAGAGAAAGTCACTGGGCCAGGZATTGCCAGTCCGAAGACTAACT
K K P V K K R K S W G Q E L P V P K T N
481 TGCCCCAAGGAAAAGGGCCAAGACTGAAGATGAGAAAGAGCAACGTGGTATCGAGCGCG
L P P R K R A K T E D E K E Q R R I E R

FIG.-28A

541	V L R N R A A A Q T S R E E R K R L E M E	TCTCTCGCAATCGTGGGGCGCACAAACATCAAGCGAGGCCAACGCTGAAATGGAGA
601	K L E N E K I Q M E Q Q N Q F I I L Q R L	AGTTGGAAAATGAGAAAGATTAGATGGAAACAGCAAACCAAAACCAAGTTCCTCTGAAACGACTAT
6661	S Q M E A E N N R L N Q Q V A Q L S A E	CCCAAGATGGAGCTGAGAAACAAATCGTTAAACCAACAAGTCCGTCAACTATCGTCTGAGG
7221	V R G S R G N T P K P G S P V S A S P T	TCCGGGGCTCCGGCAACACTCCAAAGGCCGGTCCCCCTCTCAAGCTTCTCTACCG
781	L T P T L F K Q E R D E I P L E R I I P F	TAACACTCTACCCATTATAACAGAACCGGAGAAATCCCTCTGAAACGGATTCTTCC
841	P T P S I T D Y S P T L R P S T L A E S	CCACACCCCTATCACCGACTACTCCCTAACCTTGAGGGCTTCACTCTGGCTGAGTCCT
901	S D V T Q H P A	CCGACGTGACACAACATCCCGAGCGgggttgtgtcgaccctgcgaATGTCCGTCGACT
961	E G F G S A L S L F D V G S N P E P H A	CGAAGGGAAAGGAAAGTGCCTCTCTCTTGACTGTCGGCTCAAAACCTGAAACCTCACGC

FIG. 28B

1021 TGCCCATGATCTTGCAAGCTCCCTCTGACCATGACTTCCACCCGCTATTCAACGTTGA
A D D L A A P L S D D D F H R L F N V D
1081 TTCAACCGGTTGGGTCAGATTCCTAGTCCTTGAAAGACGGGTTGCCCTTGACGTTCTCGA
S P V G S D S S V L E D G F A F D V L D
1141 CGGAGGAGATCTATCGAATTCCATTGATTCTATGGTTGATTTCGACCCGAAATCTGT
G G D L S A F P F D S M V D F D P E S V
1201 TGGCTTCGAAGGGCATCGAGCCGCCCAAGGTCTTCCGGATGAGACTTCTGCCAGACTC
G F E G I E P P H G L P D E T S R Q T S
1261 TAGCGTGCACCCAGCCCTGGCGGTCACTTCGATGCGACCGGCAGGGCATTTGAGC
S V Q P S L G A S T S R C D G Q G I A A
1321 TGGCTGTTAGGGAGCTTTCGCCAGGGAGATGCCATGGCTGTGATGGTAACGGAGTCC
G C
1381 ATGCGAGCTGGAGTCCTTGTGACCTTGGCTGGAGATGAGACCTACTCGAACAGCGCG
1441 GACCGACGCAAACGAATCTTGAGCGGGTTGAATCAGCGAAAACCTGACGGCGAAAGTATAA
1501 TTGGGAAAGTCCTCAAGGGAGTACCGGAGTTCACTGGAGTTCAAGGGACCCAAAGGGCGT
1561 TGACGTCTCCTTATGGGCAAGCATGTTAGGGTCCGGTGTAAATTATCATAAATCC
1621 TTATTAATTATCTAGATTCAATAACGAGTTGATTTGCTGTCATC

FIG._28C

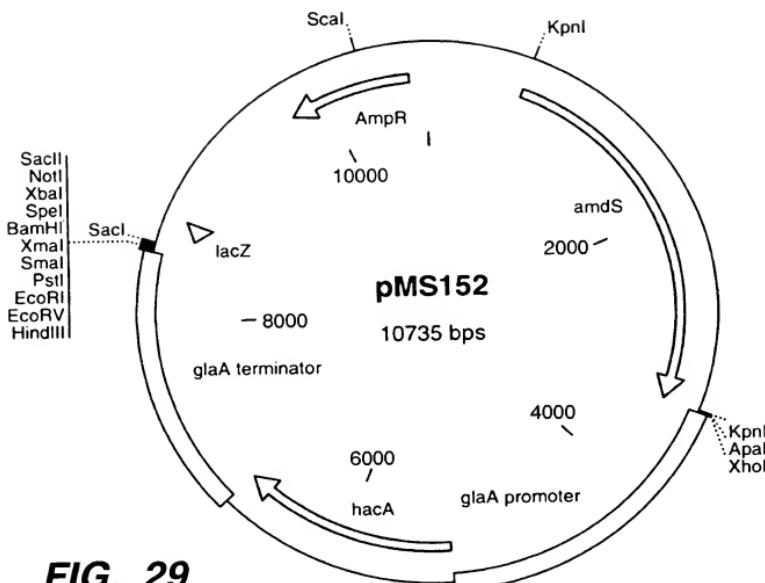


FIG._29

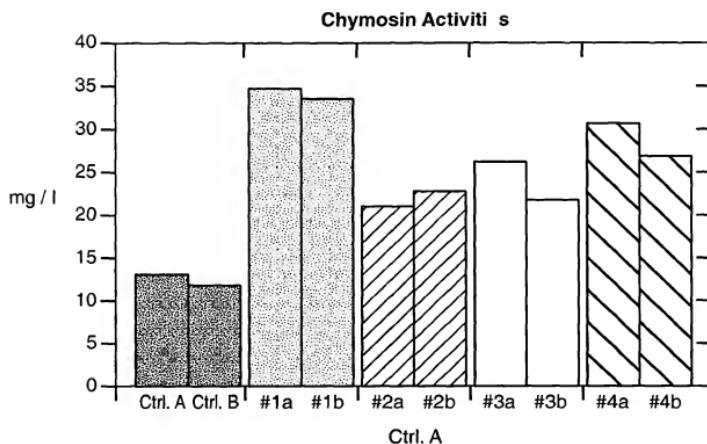


FIG._30

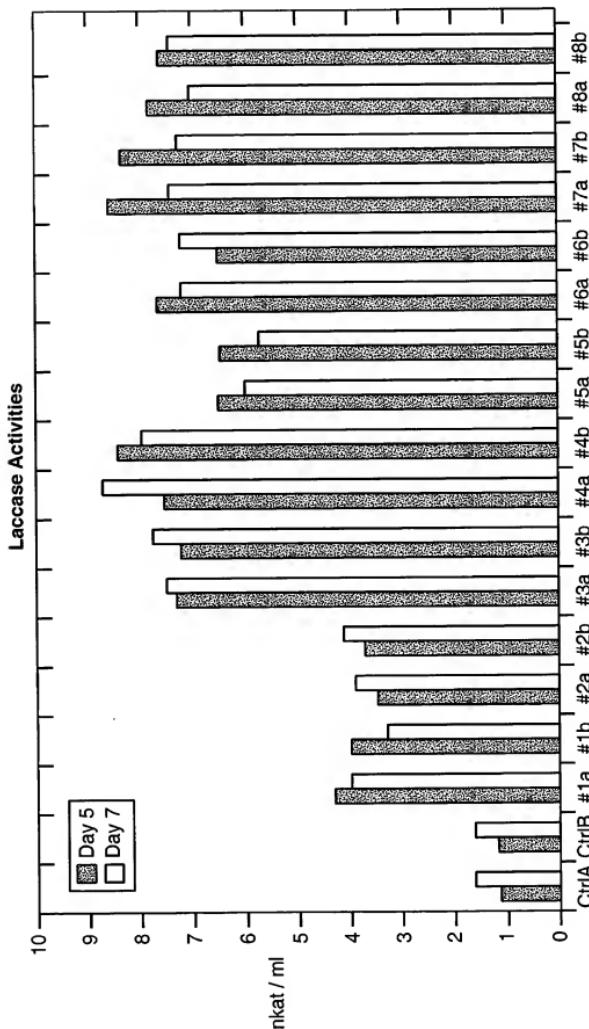


FIG.-31